

Quaker Oats

CASE
SUMMARY

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QUAKER OATS (DIVISION OF PEPSICO)

Cedar Rapids, Iowa

Linn County

Intern: Ted Cauwels

Major: Masters in Environmental Engineering

School: The University of Iowa



The Company

PepsiCo is comprised of Pepsi, Frito Lay, Tropicana, Gatorade and Quaker Divisions. Quaker is among the four largest manufacturers of cold cereal with popular brands Captain Crunch and Life. Captain Crunch is the leading pre-sweetened kids' cereal and Life ranks high in the all-family segment. In addition, Quaker holds Number One positions in the respective categories of Grits, Oats, Rice Cakes, Chewy Granola Bars, Rice-A-Roni, and Aunt Jemima pancake syrups and mixes. The Cedar Rapids plant, situated on nearly 30 acres of land, is one of 12 Quaker plants, has 36 packaging lines, and averages 1,200 employees.

Project Background

Quaker Oats has a strong recycling program, having reduced its landfilled waste from 275 to 125 tons/mo. since 1995. Such measures are primarily a result of the Waste Reduction Assistance Program (WRAP) having completed a report in 1996 for Quaker Oats.



Incentives to Change

WRAP believes it essential to implement a program to identify, quantify and characterize all waste streams to determine waste reduction opportunities with greatest potential, minimize environmental impact and reduce associated costs.

Results

Three opportunities for potential annual savings are:

- 1. Environmental Loss Tracking System (ELTS)-\$730,000.** An ELTS was created using Excel spreadsheet software to track environmental losses including wastewater, well/city water, electricity, natural gas, steam and landfilled waste. The majority of the losses are tracked back to 1997, segregated by year, and can currently be tracked in the spreadsheet through 2013. Numerical data is also represented in graphical form for improved portrayal of temporal trends. Tracking systems expose areas in which the greatest loss occurs, from which P2 strategies can be applied to reduce environmental impact and costs associated. The ELTS will act as a model for all other PepsiCo plants and has been normalized to production for additional insight. The savings estimation is considered to be indirect and not completely justified, but the potential for

savings to materialize becomes transparent with the onset of the ELTS. It is assumed that the tracking system will create a heightened awareness of environmental losses throughout the plant and ultimately result in a conservative 10 percent reduction in environmental losses, equivalent to \$730,000 based on recent utility charges.

2. Recycling Plastic Bottles-\$3,500. Plastic #5 bottles used for bottling Aunt Jemima Syrup are currently sent to Bluestem landfill. The majority of the bottles contain syrup residue which makes them difficult to recycle, while the remaining are simply damaged. Quaker's current recycling vendor, North Cedar Recycling, is willing to accept the bottles and will provide all needed items, thus diverting 57 tons per year from the landfill. The only expense would be 75 additional man-hours per year, which all would be absorbed by the current staff.



3. Syrup Waste Loadout-\$23,500. During Aunt Jemima Syrup flavor change, approximately 200 gallons of syrup are disposed of into the sanitary drain. Flavor changes occur four to five times per week, yielding an annual total of 45,000 gallons of syrup drained to the sewer. The Cedar Rapids Water Pollution Control Facility designates surcharges for the excess Biochemical Oxygen Demand (BOD) associated, totaling \$17,550 per year. Food Waste Solutions, an animal feed vendor, is willing to pay one cent per pound for the waste product, providing added revenue of \$5,250 per year. However, capital costs alone for the proposed system is \$210,000, which would result in a payback period of more than nine years. In turn, ways in which the wasted syrup can be channeled back into the product line will be researched in the months to come.

On an annual basis, total opportunities for Quaker Oats include 114,250 pounds of plastic diverted from the landfill, 45,000 gallons of syrup or 198,500 lbs BOD diverted from the sanitary drain, and all future indirect reductions in waste resulting from the Environmental Loss Tracking System created.